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Respectfully printed  
To the London Medical Society  
By the Author.







OF LONDON. MEDICAL  
AN  
INQUIRY

INTO

THE EFFICACY OF OXYGENE,

IN THE

CURE OF SYPHILIS.

*To which are subjoined,*

A few general Observations on its Application,  
in various other Disorders.

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— Ergo fungar vice cotis, acutum  
Reddere quæ ferrum valet, exors ipsa secandi.

HOR.

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*BY CHARLES PLATT,*

Surgeon to the New Finsbury Dispensary, and Member of the  
Royal College of Surgeons, London.

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TO  
JAMES WARE, ESQ.

THIS SHORT ESSAY

IS INSCRIBED,

AS A TRIBUTE OF RESPECT,

BY HIS OBLIGED FRIEND,

THE AUTHOR.

Bride Court, New Bridge Street,  
December 2, 1801.

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1843-1844 W. 20th St.

1845-1846 W. 20th St.

1847-1848 W. 20th St.

1849-1850 W. 20th St.

1851-1852 W. 20th St.

1853-1854 W. 20th St.



## INTRODUCTION.

THE controversy respecting the exhibition of saline substances in venereal affections, hath, with a few exceptions, been conducted with such candour and ability, as to reflect much credit on those engaged in so laudable a pursuit.

The liberty I take to claim the indulgence of the Public on a subject that hath been so ably discussed, may, perhaps, be considered rather arrogant, if not superfluous. In the prosecution of this design, however, I have in contemplation two objects;—the one, to ascertain, by reference to practical experiments, the antidotal power of oxygene in syphilitic complaints; and the other, should my success not be commensurate

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with

with my expectation, to investigate the cause of such contrariety of sentiment.

It may be regarded as a circumstance of peculiar singularity, that those who have written on this interesting subject, though in direct opposition to each other, may both, to a certain extent, be correct in their conclusions. This opinion, without explanation, may appear rather paradoxical; but, if we consider the great variety of diseases, the parts most obnoxious to the venereal contagion are liable to, and the almost invariable practice of referring every diseased appearance of those parts to a syphilitic source, I think the difficulty will cease, without arraigning the veracity of either party.

I have been induced to call the attention of the medical practitioner to this much neglected



glected consideration, not from the value and importance of the observations, for I am too sensible of their imperfection, but as stimulating those possessed of talents and opportunities, more accurately to discriminate the various morbid appearances that are occasionally occurring, which, though apparently similar, are yet essentially different.

In surveying the innumerable and complicated diseases to which mankind are subject, we perhaps shall find few productive of consequences more calamitous than those arising from the venereal poison ; since it not only exerts its malignant influence on the immediately afflicted patient, but too frequently imparts its pernicious qualities to an innocent posterity. Its deleterious effects are like the northern blight ; for, while we are ignorant of its approach, we are yet but

too fatally convinced of its baneful operation.

About the termination of the fifteenth century, it is conjectured the syphilitic disease was introduced into Europe from some of the new-discovered American Islands. From that period to the present, much as we are indebted to the united abilities of so many intelligent writers who have favoured the world with their sentiments on this subject, still it is to be lamented, that a multiplicity of perplexing cases daily occurring, resist the common and generally adopted mode of treatment. Whether the want of more powerful remedies, or a more judicious administration of those already known, be the cause of this failure, is a difficulty often experienced, but not yet satisfactorily explained.

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No one, I am persuaded, will deny the advantage of frequently collecting the scattered, though imperfect ideas, that chance, or the labour and ingenuity of individuals, may have produced; and by occasionally forming a summary of these, it would be lamentable indeed, if some useful hint could not be derived, or some practical information inculcated.

Our attention hath of late been very commendably excited by an ingenious mode of exhibiting oxygenous substances, as a remedy in eradicating syphilitic complaints. These saline substances unquestionably possess great activity, and are capable of producing some important changes, in the animal economy; but whether the extent of the testimony already promulgated in their favour, entitles them to rank as specifics, so strenuously con-

tended for by their advocates, can only be determined by an impartial investigation. Candour and truth compel me to observe, that the result of some experiments, carefully conducted, do not incline me to draw so favourable a conclusion. Having, from a variety of sources, acquired a strong opinion in favour of the antisyphilitic quality of the oxygenous substances, I neglected no opportunity that occurred, in the pursuit of so important a subject; and with what success, will be better determined after a perusal of the subsequent sheets.

AN  
INQUIRY  
INTO THE  
EFFICACY OF OXYGENE,  
&c. &c.

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**I**N the prosecution of this inquiry, it seems proper to make some general observations on the gonorrhœa virulenta and lues venerea, explanatory of their peculiar nature.

The term gonorrhœa hath been objected to by Dr. Swediaur,\* and some others, as not strictly applicable to our present knowledge of the disease. The objection is not

\* Dr. Swediaur wishes to adopt the term blennorrhœa.—Vide practical Observations on Venereal Complaints. Turner thinks the nature of the disease would be more correctly expressed by stillicidium gallicum, vel fluxus virgæ purulentus et contagiosus.—Vide Syphilis, page 97.



without some foundation ; for, when Astruc and the preceding authors wrote, they probably considered it as a kind of feminis profluvium.\* A very superficial information is sufficient to detect the fallacy of such an opinion ; but as the precise nature of this discharge (whether mucous or purulent) hath not been satisfactorily ascertained, till nosologists invent a more appropriate term, it may be adviseable to continue the present, notwithstanding its apparent imperfection. But a subject of infinitely more importance than merely the appellation of a disease engages our present attention.

The minds of practitioners have often been agitated with respect to the identity of the contagious poison producing gonorrhœa virulenta and lues venerea. The late Mr. Hunter,† to whose comprehensive

\* “ The seminal fluid distills from the urethra in men affected with the gonorrhœa.” Astruc on Ven. Dif. book III. chap. i. sect. ii. 4to.

† Vide Treatise on the Venereal Disease.

genius we owe the solution of many physiological difficulties, has endeavoured to establish a theory, which, for ingenuity, if not *originality*,\* is very deservedly entitled to every attention.

\* Astruc expresses his surprize, “ that so many different diseases should arise from the same poison applied after the same manner to the genitals in different persons ; sometimes a gonorrhœa, sometimes a bubo, sometimes chancrous ulcers, sometimes altogether. But this difficulty seems capable of being solved by the different force of the poison acting upon the parts, and the *different structure of the parts* upon which the poison acts.”—Vide book III. chap. vii. sect. ii.

These observations seem to militate against the originality of Mr. Hunter's theory ; for it cannot be supposed a person of his acumen would have suffered these remarks to escape his notice, and that he had perused this celebrated author we have little doubt, from various extracts to be found in his own publication : but admitting the first germ to have originated with Astruc, to Mr. Hunter are we indebted for the clear and perspicuous manner in which he has elucidated this subject, not to mention the possibility of two writers delivering their sentiments on the same subject, adopting similar ideas, without previously knowing each other's opinion.

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The surface of the body he divides into two kinds; the one he denominates a secreting surface, the other a non-secreting surface; and he endeavours to prove the irritation produced by the venereal virus, occasions, like all other irritation, an increased action in the vicinity of the irritated vessels.

If this irritation takes place on a non-secreting surface, or one covered with the cuticle, the effect will usually be, a collection of a thin fluid under the cuticle, forming a small pustule: if this be suffered to remain, the consequence will be, a loss of substance from the confined fluid; and when this cuticle breaks an ulcer appears. But if this matter be applied to a secreting surface, as the urethra, anus, eyes, &c. an increased and diseased secretion is produced. When any part is irritated to a certain extent, it invariably excites inflammation, and forms matter, the intention of which is to remove the irritating cause: this process is easily effected when on a secreting surface. Hence  
the



the admission of this explanation enables us to assign a reason why gonorrhœa should be so easily eradicated, and, in some instances, why it should possess the power of effecting its own cure. For as no alteration in the structure of the parts is produced, the irritation which first excites this increased action will gradually and insensibly subside. But when this peculiar irritation has been applied to a non-secreting surface, its effects are very different, as the destruction of a part from the ulcerative process becomes a necessary consequence. Hence chancres can seldom or never experience this happy termination; a solution of continuity takes place, the venereal action, when once it has commenced, continually increases and multiplies itself, and the application of a different or more powerful irritation is necessary to destroy the venereal virus.

Satisfactory as this mode of reasoning may be to many, yet it does not bring conviction  
to

to the minds of every one. Mr. Bell,\* a writer of some celebrity, asserts, in opposition to this theory, that gonorrhœa virulenta and lues venerea, originate from two distinct species of contagion ; and among a variety of arguments, some of the following are considered as the most important.

1. If the contagious matter of gonorrhœa and lues was the same, the latter would more frequently occur than the former, which is contrary to repeated and universal experience.

2. Admitting this morbid poison to be the same, gonorrhœa, in a great proportion of cases, would terminate in lues, and chancres in gonorrhœa.

3. If the two diseases were of the same nature, and arose from the same contagion,

\* Vide Bell's Treatise on Gonorrhœa Virulenta, and Lues Venerea.

they

they would have appeared nearly at the same time in every country to which the infection had been carried. Whereas it is evident, from history, that the lues venerea was known in Europe long before the gonorrhœa virulenta.

4. In various parts of Scotland, particularly in some of the Highlands, the common people have for a length of time been afflicted with the lues venerea, under the denomination, in some places, of yaws; in others, of fibbens, or sivvens, and which still retains its original form, without a single instance of gonorrhœa having been produced by it.

“ These historical facts (Mr. Bell\* remarks) all tend to prove, that where only  
 “ one of these diseases has been imported to  
 “ a particular district, it has always remain-  
 “ ed distinct, without producing the other,  
 “ which we cannot suppose would have hap-

\* Vide Bell, vol. i. page 35.



“pened if both were formed by the same  
“contagion.”

These observations, however ingenious, will perhaps be found not altogether incontrovertible.

1st. It has been contended, that if the contagious poison of gonorrhœa virulenta, and lues venerea, was specifically the same, the latter would be more frequent than the former; but this I conceive only demonstrates, that the secreting surface is more easily irritated, and excited into a diseased action, than the non-secreting surface.

2dly. If the unity of the venereal virus be admitted, gonorrhœa, it has been remarked, ought frequently to terminate in lues, and lues in gonorrhœa; but this cannot be considered as a necessary consequence: for this diversity of diseased action arises, not from a difference of the morbid matter, but is occasioned by the same poison operating  
on

on two distinct substances, whose structure and whose action materially differ from one another. In gonorrhœa it acts on a secreting surface, and produces a diseased secretion, and the cessation of that discharge is a proof that the source of infection is destroyed.

3dly. It has been remarked, that gonorrhœa virulenta was not discovered for a considerable period after the lues venerea; but it does not follow, that gonorrhœa virulenta had not previously existed: it only proves it was considered rather the symptom of some other complaint than the venereal, as there are several passages in the Greek and Arabian writers, as well as in the sacred volumes,\* that mention a simple gonorrhœa, or running of the reins, a complaint, according to Astruc,† coeval with the human race.

4thly. With respect to the supposition of the yaws and fibbens, being varieties of the

\* Levit. ch. xv. ver. 2. † Astruc, Ven. Dif. b. i. ch. 4.

*lues venerea*, the dissimilarity of these diseases in many circumstances, is very apparent, which we shall endeavour to point out hereafter.\*

5thly. There is another criterion of very considerable importance, that seems to have escaped the notice of those who are contending for the plurality of venereal contagion. Many and innumerable are the instances where *gonorrhœa virulenta* and *lues venerea*, have indiscriminately been produced from the same stock of infection. Upon what principle can this apparent contradiction be explained? Can we suppose the venereal contagion, like some chemical substances, possesses an elective attraction, with which the constitution of some more powerfully combine with one species of the contagion than another? Or is it not more rational to ascribe it to the known operation of a morbid poison; which by acting on different sub-

\* Vide page 51.

stances,



stances, produces different effects, and not to any specific difference in the contagion itself?\*

Dr. Darwin,† in his *Zoonomia*, has some very singular remarks respecting the pertussis, or chin-cough, resembling the gonorrhœa

\* Dr. Mitchill, in his *Remarks on the Gaseous Oxyd of Azote, or of Nitrogene*, has attempted to ascertain the true essence of contagion, and to explain the phenomena of fever. “In all probability much of the difference observable in the operation of different poisons, arise from the sensibility, irritability, structure and functions of the parts to which it is applied. This idea at least seems to be countenanced by what we observe in the syphilitic virus, which, when applied to a secreting surface, causes gonorrhœa; to a dry one, chancre; to a glandular surface, bubo. Who knows but a similar exciting cause may, by operating on the constitution in one way, produce continued, in another remittent, and in a third intermittent fevers, which in reality differ from each other less in their causes, than in the particular part of the body to which this cause is applied?” Vide *Considerations on Factitious Air*, Appendix, No. I. Part. iv and v.

† Vide *Zoonomia*, Vol. II. cl. ii. 1, 3, 8.

venerea. He observes, that they are both received by infection, are both diseases of the mucous membrane, and are both generally cured in four or six weeks without medicine. If ulcers in the cellular membrane, under the mucous membrane occur, they are of the phagædenic kind, and destroy the patient in both diseases, if no medicine be administered. Hence the cure should be similar in both these diseases, first general evacuations and diluents, and afterwards pills formed of calomel, opium and rhubarb. The opium promotes absorption from the mucous membrane, the mercury prevents ulcers being formed, or cures them, as in the lues venerea, and the rhubarb is necessary to keep the bowels open.

The infectious property of both these diseases, though arising from different sources, will not be denied, and that they are diseases of the mucous membrane is generally admitted: but in endeavouring to establish their similarity, the ingenious author seems to have suffered his usual penetration to escape him, when



when he asserts that ulcers of the phagædenic kind are produced in gonorrhœa, as well as the pertussis, and that both diseases destroy the patient. That the pertussis, in various instances, has proved fatal, is beyond contradiction; but I believe we shall find few, if any well authenticated cases, in which gonorrhœa terminated in the destruction of the patient. From very accurate dissections of the urethræ of executed criminals,\* labouring under gonorrhœa, nothing like this phagædenic ulcer has ever yet been discovered.

It is with some degree of surprize I observed in a very recent publication,† a revival of those opinions, which have been considered almost obsolete; it is there remarked that gonorrhœa is invariably attended with ulcerations in the urethra. Various authorities are quoted by this gentleman in support

\* Hunter, on Venereal Disease, page 30.

† Whateley's Practical Observations on the Cure of Gonorrhœa Virul. page 12.



of the accuracy of his opinion, but most of those authorities are of a date anterior to the period when any difference on this subject prevailed. The late Dr. Hunter, about the year 1749, discovered “that matter may be formed without breach of substance:” since that period various opportunities have presented themselves, and prove the correctness of this observation. Mr. J. Hunter has examined “the urethra of many who, at the time of their death, had a gonorrhœa, yet he never found a sore in any; but always observed that the urethra, near the glans, was more blood-shot than usual, and the lacunæ were often filled with matter.”\*

Ulcerations may occasionally take place in the urethra, as well as in other parts of the body, as observed by Dr. Baillie, in his *Morbid Anatomy* (page 227): but then we have little or no proof of its being occasioned by

\* Venereal Disease, page 30.

gonorrhœa,

gonorrhœa, as the ulcerative process may be produced from the irritation of calculi, bougies, strictures, acrid injections, or a general diseased state of the urethra.

In the treatment of gonorrhœa I have but little to remark, as the saline substances do not appear to have been so strenuously recommended in this species of the disorder; and more particularly as I was anxious to try the antidotal power of these substances in lues, I have not been very solicitous in prosecuting this part of the subject.

I have generally found a few aperient and febrifuge medicines, exhibited previous to the use of a saturnine or vitriolic injection, have had the happiest effect.

Although the cure of gonorrhœa is often effected without much difficulty, yet cases do not unfrequently occur, where this species of the disease is succeeded by tedious and troublesome gleets. It is a matter of some

difficulty to ascertain the precise period, when the infectious and malignant discharge of a gonorrhœa ceases, and the innoxious flux of a gleet commences : probably the cessation of the inflammatory symptoms may be considered as the best, but it is not a certain diagnosis. A gleet may be considered as a local disease, unconnected with the system in general ; the prevalent idea of its originating from debility and relaxation, has been very ably combated, and very justly rejected, as well as the fallacy of applying the laws of inanimate matter to explain those connected with animated bodies.

The successful treatment of gleets is more likely to be accomplished by stimulants than astringents or sedatives, as it is not improbable the disease may be more connected with deficient venous absorption, than an increased arterial exhalation. With a view of exciting one irritation to destroy another, and to increase the powers of absorption, I have lately employed the muriatic acid with  
very



very considerable success, in the proportion of forty drops of the acid, to four ounces of distilled water, to be used as an injection three or four times in the day. The proportion of the acid to be increased or diminished, according to circumstances. On a similar principle bougies may be employed with advantage, either alone, or when they are smeared with some stimulating ointment, one drachm of the hydrargyrus nitratus rubbed finely levigated, mixed with an ounce of any simple unguent, forms a very useful application.

When the venereal virus by absorption, has contaminated the system, it hath generally been denominated the lues venerea.

Having briefly described the principal syphilitic complaints, it may not be improper to give a concise history of the oxygenous substances recommended for their removal, and of those conjectures that may be supposed to have led to their adoption.

Mr. Scott,\* of Bombay, in endeavouring to investigate the properties of the bile, a secretion well known to be connected with many of the diseases of the warm climates; and to ascertain, if possible, by what means the oxyds of mercury are so singularly qualified for removing hepatic complaints, had recourse to the following experiment. A drachm of the bile of a buffalo, after being carefully separated from its soda, and from the lymphatic matter with which it is united, was put into a vessel with half a drachm of the red calx of mercury, and ten or twelve ounces of water; upon the mixture being heated, he was surprised to observe the base of the bile had acquired a remarkable increase of solubility, and which was attributed to the oxygenation of the resin by the pure air of the calx.

All the calces of mercury are known to

\* Vide Considerations on Factitious Airs; by T. Beddoes, M. D. and J. Watt, Engineer. Appendix, No. II. part 4—5.

contain



contain a quantity of pure air, but hitherto it had not been made evident, that the effect of mercury in diseases of the liver, or in other maladies depended on the extrication of oxygen and not on the metal itself. To determine this point, the nitric acid was the first substance employed, being known to contain about four parts of vital air united to one of azote, with a certain proportion of water. Mr. Scott himself, was the subject of the first experiment, having suffered much from a liver complaint. On the eleventh of September he began taking one drachm of the nitric acid diluted with water, this quantity was continued daily to the seventh day, when he experienced such a considerable improvement in his health, that he desisted from taking any more of the acid. The same remedy has been administered to many, who had taken mercury for hepatic obstructions without success; invariably has it been attended with the most agreeable consequences. Several people who were much reduced by tedious intermittents, have been oxygenated



oxygenated with the happiest effect, that kind of fever being often connected with a diseased liver or spleen.

This success produced an anxiety to know whether or not the nitric acid would eradicate the various symptoms of syphilis. In the removal of this complaint, Mr. Scott informs us, he has been equally fortunate. From extensive experience of the good effects of the nitric acid in lues, he is persuaded it is not less effectual than mercury, in removing that disease, in all its forms, and in every stage of its continuance. In some instances it has even superior powers, for he succeeded completely with the acid in cases, where mercury, administered both in India and in Europe, for years together, had failed.

Mr. Cruickshank\* is likewise disposed to attribute the good effects of the different

\* Vide Cases of the Diabetes Mellitus, with the result of the trial of certain acids in the treatment of lues venerea by J. Rollo, M. D. and W. Cruickshank, Surgeon.

mercurial preparations, to their combination with oxygene, and that their antisyphilitic quality was dependant on the extrication of this principle ; a suggestion he ingenuously acknowledges to have derived from Dr. Girtanner of Goettingen.\*

Substances known to contain a large proportion of oxygene were employed, such as the nitrous, oxygenated, muriatic, and citric acids. Though the bases of these are different, yet they all abound with oxygene ; if the effect therefore, produced on the disease and the system, was similar, it was a strong presumptive proof that this salutary operation must depend on the extrication of the oxygenous principle.

† Dr. Girtanner, in assigning the cause of irritability to the influence of oxygene, has incurred the censure of some, for assuming to himself a discovery which had been previously made known by Dr. Godwyn ; who has satisfactorily shewn, that oxygene combines with the blood during respiration, and that its irritating property is dependant on that principle. Vide Godwyn's Connexion of Life with Respiration.

Several



Several cases were selected with primary and secondary affections ; such as were strongly and decisively marked ; and where no mercurial remedies had been employed. To some the nitrous acid was given, to others the oxygenated muriatic, or the muriate of pot-ash. In every instance, we are informed, that the exhibition of these remedies was attended with the most permanent success.

Mr. Cruickshank remarks, that these remedies produce their salutary effects without occasioning any thing like mercurial salivation. In Mr. Scott's experiment, salivation, we are informed, very like the mercurial, was a constant and invariable effect. Can the difference of climate account for effects so widely different ? Or is it not more probable that the temporary soreness of the gums and adjacent parts, occasioned by the acid, was mistaken for that peculiar action on the salivary glands, which mercury, under certain circumstances, never fails to produce ?

A variety



A variety of successful cases are subjoined by Mr. Cruickshank, in testimony of the superior efficacy of these remedies, from various respectable practitioners.

What a pleasing and gratifying account are we here presented with, of the removal of one of the most disastrous complaints that can afflict mankind, by remedies so mild, and apparently so infallible. Happy should I be, could I join in acknowledging so invaluable a discovery. Solicitous, however, only for the promulgation of truth, I have ventured to make known the result of that experience, which unfortunately deprives me of the satisfaction to be expected from such a conviction.

In a variety of instances, the failure of the oxygenous plan hath been but too evident; yet as the multiplication of cases that are nearly similar, can answer no useful purpose, a few will be selected, that appeared more decidedly to ascertain this point. To those  
who

who have perused the very able and satisfactory account of these remedies, by Mr. Blair,\* any additional observations may appear almost superfluous ; but as the minds of many practitioners are still divided on this interesting subject, in an investigation so important as the restoration of health, or the correction of error, the smallest progression towards attaining that desirable end, will not, I trust, be considered altogether unworthy the public attention. By candidly collecting the accumulated mass of evidence, we shall be enabled fairly to appreciate the respective merit of the old and the new remedies.

In the treatment of the subsequent cases, the instructions of Mr. Cruickshank, as far as circumstances would permit, were carefully attended to.

\* Blair's Essays on the Venereal Disease.

*Experiment*



## CASE I.

*Experiments with the Nitrous Acid.*

THE first case that afforded an opportunity of trying the efficacy of the nitrous acid, was that of W. P. aged 36 years. He had two large deep seated well marked chancres, on the right side of the glans penis, near the frænum, attended with a phymosis and an incipient bubo. June 20th he began taking a measured drachm and a half of the fuming nitrous acid, diluted with a quart of water; this quantity was taken in the course of twenty-four hours, and repeated daily. The chancres were dressed with the white cerate, and the prepuce kept constantly moistened with a saturnine lotion. June 28th, the acid had been gradually augmented to two drachms and a half; no amendment was perceived in the chancres, and the enlargement of the inguinal gland was daily increasing. July 15th, the bubo had suppurated and discharged freely; the acid had by degrees been



been increased to three drachms. His appetite and general health were tolerably good; the acid had produced a soreness and tenderness in the gums, but no ptyalism. The chancres were now become very troublesome, and had spread over the greater part of the glands. July 30th, at this time both the chancres, and the ruptured lips of the bubo, assumed such a very unfavourable appearance, that I was determined to abandon the acid, and to have recourse to mercury. One drachm of the unguentum hydrargyri fortius was rubbed into the thighs every night and morning. The chancres were cautiously touched with argentum nitratum, and dressed with a mercurial ointment. This plan was persevered in for about six weeks, when he was perfectly relieved from every syphilitic symptom.

Case II. The wife of a reputable tradesman, aged 25 years, from the imprudence of her husband, contracted the venereal disease, attended with the following symptoms:  
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an extensive ulceration on the right labium pudendorum, an enlargement of the inguinal gland on the same side, considerable discharge and much ardor urinæ. Partly from ignorance of the nature of her complaint, and partly from motives of delicacy, she had for some time neglected seeking relief. On July 6th, she was requested to take one drachm and a half of the nitrous acid, diluted in a quart of water, and the same quantity to be repeated daily. July 21st, the acid was increased to two drachms, the bubo approaching so near a state of suppuration, a warm linseed poultice was advised to be applied; two days afterwards it broke and discharged a considerable quantity of purulent well digested matter. July 29th, within these two or three days chancrous ulcerations have made their appearance on the opposite labium pudendorum. August the 15th, every syphilitic symptom is increased; she became very impatient and much dissatisfied. Despairing of success from this mode, I was determined to adopt another. The acid was

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omitted,

omitted, and two grains of calomel made into a pill, were given every night and morning; the chancres and bubo were occasionally touched with argentum nitratum, and dressed with a mild mercurial ointment. August 26th, tormented with pain in the bowels, and troublesome diarrhoea; the bark and astringent medicines were exhibited with effect. September the 5th, soreness and tenderness in the gums, but very little increased flow of the saliva. The lips of the bubo, which had been so long hardened and encrusted, are now nearly healed; the chancrous ulcerations are daily mending and contracting in size. The calomel was continued in small doses, till the second week in October. Every syphilitic symptom was eradicated, and she was restored to perfect health.

Case III. The husband of the person whose narrative was the subject of the immediately preceding case, had several chancres on the glans penis, and inside of the prepuce, and  
a bubo



a bubo which had suppurated. The nitrous acid was taken by him in a much larger quantity, and for a greater length of time, without experiencing the smallest advantage from it: and he was finally relieved by a mercurial course.

Case IV.—Mr. H. applied to me with two extensive chancres on the glans penis, one on each side near the frœnum, and an enlargement of the right inguinal gland, approaching almost to suppuration. A large deep seated ulcer appeared on each of the tonsils, and the posterior part of the fauces, was much inflamed. The soreness in his throat he had felt for some months, and considered it as the relics of a former venereal complaint imperfectly cured. The chancres were recently acquired. August the 25th, three drachms of the nitrous acid, diluted with a proportionable quantity of water, were exhibited, and repeated daily till September the 13th. The chancres were dressed with white cerate, as well as the bubo, which had

suppurated. September 20th, he now complained of intolerable soreness about his gums and fauces, and being seriously alarmed for the safety of his teeth (as the enamel was much corroded), it was with difficulty I could prevail on him to persist in the use of the acid a little longer. He, however, with some reluctance complied, and he continued the use of it till October 7. About this time he complained of nocturnal pains, particularly in the tibiæ; eruptions were making their appearance on the surface of the body, which strongly resembled venereal blotches.

Making no progress towards a recovery, and the disorder gradually increasing, I was not less anxious about my own reputation than his safety. At this melancholy crisis it was a happy consolation to know, there still existed a remedy, the specific quality of which stands, I believe, uncontroverted; I had immediate recourse to it, and adopted that mode which, of all others, I consider not only the most expeditious, but the most permanent,

permanent, viz. mercurial inunction. One drachm of the unguentum hydrargyri fortius was directed to be rubbed into the inside of the thigh every night and morning; the throat was fumigated with hydrargyrus sulphuratus ruber, and the occasional application of a solution of hydrargyrus muriatus cum melle rosæ; the chancres were dressed with argentum nitratum, and a mild mercurial ointment. This plan was persisted in for about six weeks, a gentle ptyalism was still kept up, but a profuse salivation cautiously avoided. I have seldom experienced a case that produced more anxiety, or one that terminated more happily.

*Experiments with Oxygenated Muriatic Acid.*

Case V.—W. H. had a deep seated well marked chancre near the centre of the glans penis, and an enlargement in both inguinal glands. July the 20th, he was requested to take ten drops of the oxygenated muriatic acid

D 3

four



four times a day in a glass of water; the chancre was dressed with a simple ointment; the bubo on the left side was dispersed, that on the right suppurated. July 30th, the acid had been gradually augmented to forty drops, three times a day. The dimension of the chancre is considerably increased; the bubo discharges kindly and looks well. August the 19th, the bubo was nearly healed, but the chancrous ulceration was extending itself very rapidly. August 25th, despairing of success from this mode of treatment, the acid was omitted, and mercurial frictions recommended, with the occasional use of the *argentum nitratum* to the chancre. This plan was continued till October 7th, when every unpleasant symptom was completely removed.

Case VI.—Mr. C. applied to me, with extensive venereal sores on the glans and prepuce, attended with a troublesome phymosis. July 11th, ten drops of the oxygenated muriatic acid were taken four times a day; the  
sores

fores were dressed with white cerate, and the prepuce kept constantly moistened with a saturnine lotion. This plan was persevered in for more than a month, the dose of the acid having been gradually increased to forty drops four times a day. The system during this period ought to have been sufficiently oxygenated, to have produced some favourable change, yet no sensible advantage was effected. The mercurial frictions, with the external application of argenti nitratum, was afterwards successfully employed.

*Experiments with Oxygenated Muriate of Potash.*

Case VII.—Mr. H. had several deep seated venereal sores on the glans, attended with a painful phymosis, and an incipient bubo. September the 3d, three grains of the muriate of potash were directed to be taken four times a day, the white cerate and saturnine lotion to be applied to the affected

D 4

parts.

parts. September the 28th, he had now taken the muriate for more than three weeks, having progressively increased the dose to thirty-six grains in the day. The inflammation of the prepuce was considerably abated, and the bubo nearly dispersed, but no amendment was perceived in the chancres, on the contrary, they were increased in number and extent. He was, however, requested to persist another fortnight in the use of this medicine; he complied, but with no better success. Experiencing so little encouragement, I was anxious to try the efficacy of another remedy. October 12th, he desisted from taking any of the muriate, and mercurial frictions were recommended: which with the use of the *argentum nitratum*, were continued till the third week in November, and attended with the happiest effect.

Case VIII.—The latter end of August a gentleman applied for the relief of some unpleasant copper-coloured eruptions, about  
the



the face, forehead, and roots of the hair, and on various parts of the body, attended with occasional pains in the limbs, more particularly in the tibiæ: upon the centre of the right tibia, there was an evident enlargement; his appetite and general health were much impaired. As little doubt could be entertained but that these eruptions and nocturnal pains owed their origin to a syphilitic source, I was happy in having an opportunity of trying the efficacy of the muriate in the secondary affections. September 2d, six grains of the muriate of potash were taken four times a day. September 12th, the muriate had been gradually increased to forty grains in the day; this quantity was constantly and invariably persisted in till October 28. He occasionally complained of immoderate thirst, and severe pains in the intestines; his general health and appetite, which had been so much impaired, are greatly improved, but the eruptions, the exostosis, and the nocturnal pains, still remain undiminished. The muriate was continued till  
November

November 10th, without producing any favourable alteration. Deliberating on the propriety of prosecuting this plan, or pursuing another, I adopted the latter, from a conviction of the inefficacy of this mode. An important point however had been obtained; he had acquired a considerable increase of corporeal strength, which enabled him to combat the debilitating effect of a remedy, I no longer hesitated to recommend. November 12th, he was directed to rub one drachm of unguentum hydrargyri fortius into the thighs every night and morning. December 12th, the eruptions were more palid, and the exostosis evidently diminished in size; a profuse salivation coming on, the morning frictions were omitted. January 22d, he was compleatly relieved from the eruptions, the exostosis, and the nocturnal pains, after having for some time continued the use of the decoctum sarsaparillæ compositum. A case more strongly illustrative of the superior efficacy of one remedy compared with another, does not often occur.

These

These are some of the experiments instituted with a view, either of confirming or rejecting a practice which I am apprehensive is interesting, more from its novelty than real utility.

When men of acknowledged talent, literary as well as professional, men too of high integrity, communicate to the world a more successful mode of eradicating disease, their instructions are listened to with attention, and pursued with pleasure. Totally to deny the efficacy of the oxygenous substances, when deriving their authority from such a source, would be as illiberal as it is unjust; but when facts are opposed to facts, it is difficult to reconcile opinions militating so strongly one against another: it is like a paradoxical problem, that can only be solved by a candid and patient investigation.

It has been remarked that mercury, as well as the remedies under consideration, eradicate syphilis, by exciting a new action  
in



in the system ; in consequence of which the syphilitic one is suspended, and this suspension being continued for a sufficient length of time, the whole of the virus, from the change which the fluids naturally undergo, is at length completely expelled. Agreeably to this theory, the effects, both of mercury and the saline substances, are attributed to the developement of oxygene. Admitting this explanation to be correct, I am apprehensive we shall still have many difficulties to encounter, if we ascribe the *modus agendi* of mercury and the acids to one and the same cause.

If this peculiar irritation be excited by the extrication of oxygene, and its salutary effects are dependant on that principle, why not exhibit it in the form of vital air? as the quantity of oxygene may be more accurately ascertained, by being less encumbered with various combinations, than the substances under consideration; it would likewise have the advantage of acting more  
directly

directly on the system, and thereby operating more powerfully and more successfully. On this principle, it may be asserted every substance, capable of exciting an irritation in the system, may be advantageously employed in eradicating syphilis, the fallacy of entertaining such an opinion is sufficiently obvious. That the exhibition of mercury occasions an irritation, *sui generis*, is universally admitted : but how different is the effect of that irritation when produced by the saline substances. They have never, as far as I have had an opportunity of observing, been attended with that increased action of the salivary glands, coppery taste and fetid breath : nor is their mode of action less different than their effects.

It is difficult to account for the different success produced by the same remedies upon diseases, apparently originating from similar sources of contagion : but it is not improbable we have suffered ourselves to be deceived, in hastily considering every diseased  
appearance

appearance about the genitals, and neighbouring parts, as connected with lues venerea. In the greater number of instances, perhaps our conjectures are not ill founded; but I am fully persuaded, that cases do not unfrequently occur, where such appearances indisputably proceed from other causes. From not discriminating so accurately as we ought, the different diseased actions these parts are capable of assuming, we attach specific properties to substances, to which it is probable they are not entitled.

Impressed with the necessity of minutely attending to this distinction, I shall make a few cursory remarks, and produce some authorities in confirmation of such an opinion; being anxious to point out the difference between morbid poisons notoriously known, and others which, though evidently distinct, have usually been confounded. This interesting inquiry was originally instituted by Mr. Hunter, and hath since been prosecuted with much labour and ingenuity by Dr. Adams,



Adams,\* who has thrown a considerable portion of light on a subject hitherto involved in much obscurity.

For a morbid poison to exert its full influence, the subject that receives it must be susceptible of the diseased action. This susceptibility, in the greater number of instances, is confined to distinct species of animals, as the mange to dogs, the rot to sheep, the murrain to cattle, and an infinite variety to man. The hydrophobia from the canine virus, and the recent introduction of the vaccine contagion, are perhaps the only exceptions to this general law. But all men, and probably other animals, are not susceptible of the poisons peculiar to their species. Some men pass through life without feeling the effects of the variolous infection; others escape that of the venereal, although exposed to it as much as the greatest sufferers. Many are susceptible at one time, and not at

\* Vide Adams's Observations on morbid Poisons, Phagædena, and Cancer.

another. Others again have shewn a susceptibility of the local, and not of the constitutional infection, or no consequent disposition to the disease has been produced by absorption.

Most of those morbid poisons which produce their effects by a critical fever, as the small-pox, measles, and many infectious fevers, are productive of a certain change that renders the constitution no longer susceptible of a second attack. But those morbid poisons, which occasion diseased actions without any critical termination, as the venereal, do not enable the constitution to resist the susceptibility of their influence. Hence the frequent occurrence of the venereal disease from fresh infection.

“ When the cuticle is broken (Dr. Adams observes), or is particularly thin, the effect  
“ of morbid poisons is much more certain.

\* Vide Adams's Observations, page 64.

“ It

“ It even appears that the *healthy secretions*  
 “ of one person may, when applied under  
 “ these circumstances, prove *deleterious* to  
 “ another.”

After describing no less than nine different  
 ulcers of the penis, which Celsus\* distin-  
 guishes by their progress and situation, Dr.  
 Adams proceeds, and remarks, “ the next  
 “ species is by no means uncommon in this  
 “ country, but has too generally been con-  
 “ sidered as venereal, and treated as such.  
 “ It is either seated on the glans or inner  
 “ part of the prepuce, spreads very rapidly,  
 “ and in a short time the glans, or part of  
 “ it, mortifies, and sloughs off, after which a  
 “ circatrix forms so readily as sometimes to  
 “ endanger the urethra.”†

\* Lib. vi. cap. 18.

† Of this kind of ulcer we are referred to three  
 cases; the first to be found in the Edinb. Med. Essays,  
 vol. i. art. 19.; the second, Turner's Syphilis, p. 248;  
 and the third is related by Mr. French, in Mr. Hunter's  
 Treatise on the Ven. Dis. 385.



Dr. Willan,\* in an elegant and elaborate treatise on cutaneous diseases, among a variety of ingenious observations, has some remarks very applicable to the present subject.

“ The prurigo pudendi muliebris is somewhat analogous to the prurigo scroti in men. Deep ulceration of the parts seldom takes place in the prurigo pudendi; but the appearance of apthæ is by no means unusual. From intercourse with females under these circumstances, men are liable to be affected with apthous ulcerations on the glans, and inside of the præputium, which prove troublesome for a length of time, and often excite alarm, being mistaken for *chancres*.”

Mr. Hunter has likewise furnished us with much interesting information respecting diseases resembling the lues venerea: he suspected that “ new poisons were rising up every day, and those very similar to the

\* Dr. Willan's Description and Treatment of Cutaneous Diseases.

“ venereal in many respects, although not in  
 “ all.” He has produced a variety of cases  
 in support of that opinion.\*

There is another disease which, from its occasionally attacking the genitals, and assuming some similarity to syphilis, is frequently confounded with it. In Africa, the West Indies, and other places, it is known under the name of yaws; in Scotland is usually termed sivvens, or sibbens; and which Mr. Bell,† and some other writers, consider as a variety or peculiarity of the venereal disease.

It was never known to appear in the form of gonorrhœa, nor seldom at first upon the genitals, but more frequently primarily attacking the throat, or some part of the mouth, attended with an erysipelatous redness of the amygdalæ, uvula, and velum

\* Vide Ven. Dif. pages 61, 382, 384, 386.

† Bell's Treatise on Gon. Vir. and Lues Ven. vol. ii. page 442.

pendulum palati. If not prevented by the use of mercury, ulcers form on these parts, and commonly spread more quickly than venereal ulcers, the uvula and amygdalæ will sometimes be entirely destroyed in the course of a few days. It is particularly apt to affect the internal part of the nose, and the ossa spongiosa soon becomes carious. After the system has been contaminated with this peculiar virus, the genitals become affected, and the parts contiguous to the anus. But the most characteristic symptom of this disease, is a soft spongy excrescence, in size and colour resembling a common rasp, which is apt to appear on all such parts as either become ulcerated, or are attacked with any kind of eruption; *sivven* or *sibbens* being in many parts of the Highlands a name for the wild rasp.

It was the opinion of Dr. Gilchrist,\* that this disease seldom attacked the large and

\* Physical and Literary Essays of Edinburgh.



solid bones, and very rarely any of the others. He has seen it in every part of the body, and in every form in which lues venerea appears, except in *chancres* upon the genitals.

Such is the description of a disease, which many consider as a variety of syphilis ; and though, in some particulars, it assumes a strong resemblance to that complaint, yet in others it differs very essentially.

It has been remarked, the fibbens was never known to appear in the form of gonorrhœa, nor to produce originally any disease about the genitals. These are two circumstances so very different to what usually succeed the venereal contagion, that this alone would almost incline one to deny the identity of the two diseases, were we not furnished with some other evidence. The uvula and amygdalæ of those attacked with the fibbens, have been known to have been destroyed in a few days ; this extraordinary destruction of parts has, I believe, never yet

been discovered in the true venereal ulceration. The lues produces diseased actions without any critical termination; the fibbens on the contrary, it has been observed, has its crisis and termination, though its periods, from being longer than some fevers, appear more irregular.\* The fibbens is much more infectious than the common lues; the former spreads itself through villages and towns with a rapidity unusual in the latter, and the ulcerative process is infinitely more destructive,

From its assuming so much the appearance of a cutaneous affection, it has been considered by some a combination of the itch and syphilis, while others are disposed

\* Mr. Hunter has remarked, the constitution is susceptible of the fibbens only once, and in this respect it has a remarkable similarity to the small pox. Each has its period and decline; in both the powers of the constitution being equal to the cure. If this circumstance be well ascertained, all dispute with respect to the identity of the two diseases must immediately cease,

to

to attribute its violence to the angina maligna engrafted on the lues: by some again it has been thought to be a distemper of a bestial origin.\*

The great success that hydrargyrus muriatus has been attended with, in the cure of fibbens, only proves that mercury may be usefully employed in other complaints as well as the venereal; both the curative and prophylactic methods encourage the idea that fibbens is a peculiar cutaneous disease, propagated by the absorption of a morbid poison, but which essentially differs from the venereal.

Having noticed those ulcers and other diseased appearances about the genitals, that have sometimes been mistaken for syphilitic affections, it becomes a consideration of no inconsiderable importance, to be enabled to distinguish a chancre or true venereal ulcer

\* Vide Moseley on Sugar, with Med. Observ. p. 184.



from a spurious one. In the great variety of ulcers enumerated by Celsus, it has been remarked he has never described a thickened edge or base to any of them, and the want of this edge and base in the ulcers of most other poisons, is suspected to be the cause of that rapid destruction of parts so observable in the phagædena. There is another singular circumstance attending chancres, which I do not recollect to have seen remarked in any author I have had an opportunity of consulting, and that is the almost total absence of pain.\* It is wonderful to observe large and extensive ulcerations about the glans and prepuce attended with little or no pain, except that arising from the necessary

\* I would wish to be understood as applying this remark *only* to the ulcerative process produced by the venereal virus. For we know when the bones are attacked with this inflammation, great pain is the consequence, as well as when it seizes a glandular part, and terminates in suppuration. The painful inflammation of the delicate membrane of the urethra, in some cases of gonorrhœa, may be produced as another instance.

applications.

applications. Phagædenic ulcers, on the contrary, are exquisitely painful: it appears then the genuine venereal inflammation, acting on the soft parts, produces less pain than inflammation arising from the action of other morbid poisons; this is daily observed not only in chancres, but in the venereal ophthalmia and fore throat. A chancre, or genuine venereal ulcer, may be characterized by a thickened or callous edge and base, attended with little or no increase of pain.

The two subsequent cases are produced as examples illustrative of some of the preceding remarks.

In December 1794, a case presented itself with large and extensive ulcerations on the glans penis, and inside of the præputium, the latter considerably thickened and enlarged, attended with a very profuse discharge of purulent matter, evidently from these ulcerations. Considering the disease at that  
time

time as arising from venereal contagion, the propriety of recommending mercury was not doubted: but previous to its use the inflammation of the prepuce was attempted to be relieved, at first by the saturnine lotion, and afterwards by the poppy fomentation, with the occasional use of aperient and febrifuge medicines. In the course of a few days two grains of calomel were taken every night and morning, and continued for about a week, and afterwards mercurial frictions were employed. The ulcerations had now extended so much as to assume a very unfavourable appearance, and so exquisitely painful as to make him dread the necessary applications. Several of these ulcerated surfaces were covered with broad livid discolorations, the prepuce and the whole body of the penis were considerably swollen, and a very large substance of the glans corroded and destroyed. I began to be apprehensive of an approaching gangrene, and was anxious for further advice; the attendance of Dr. Budd  
and



and Mr. Ware was immediately requested. The mercury had not sensibly affected the salivary glands, but had occasioned a very violent diarrhœa. His bodily strength and appearance were extremely reduced and enfeebled. On the recommendation of these gentlemen, the use of mercury was for the present discontinued, and the cortex cinchonæ, with the serpentaria, was freely and liberally exhibited; wine in small quantities was given at intervals, a grain of opium was taken at bed time, and repeated for several nights. Considerable portions of the prepuce were continually sloughing off, and the exposed granulations assumed a more healthy appearance. He was relieved from the diarrhœa, and his general health considerably improved by the tonic remedies. Although doubts were entertained of the nature of this disease, still it was thought adviseable for him to resume the mercurial frictions, which were continued near six weeks. As the parts flowed off, the ulcers gradually healed,

he

he progressively amended, and was restored to perfect health.

A Gentleman belonging to one of the inns of court, applied to me with a small pustule on the dorsum penis, which I at that time regarded very slightly, and requested him to use a mild ointment night and morning. Three days afterwards it broke, and it was wonderful to observe with what rapidity these ulcerations spread themselves over the greater part of the dorsum penis, the edges were dark coloured, and extremely painful; he now complained of uneasiness in his groin; on examination the inguinal gland was discovered to be enlarged. At this period I hesitated in my mind how to act; it was possible the absorption of the irritating matter from this gangrenous-like ulceration might produce an inflammation of the inguinal gland, even to suppuration, without its being contaminated with the smallest particle of venereal virus. But having

ing had a suspicious connection, and his general health in other respects good, induced me to venture the trial of mercury.\* The ulcerations were dressed with a mild mercurial ointment, but from the extreme pain the sores were attended with, the *argentum nitratum* could not be applied, which appeared to me a very necessary detergent application, from the foul and ill-conditioned state of these ulcerations. Two grains of calomel were given every night. Within the fortnight the bubo had suppurated, and discharged a thin ichorous matter different to what is usual in venereal suppurations. A violent diarrhœa supervening, a temporary suspension of the calomel was thought advisable; bark and astringents were exhibited with effect; and it was my intention to have resumed the use of mercury, but observing the bubo completely healed, large portions of the ulcer sloughing off, and the granula-

\* This case, as well as the preceding, occurred previous to the saline substances having engaged my attention.



tion underneath looking more florid and healthy, disposed me to desist from the further use of mercury, and to adopt what is usually called the tonic plan, which happily was attended with every success.

That neither of these cases was venereal, I think is evident from the progress and termination of the disease; in both instances the ulceration was much more rapid than is usual in the true venereal inflammation; they were both destitute of the characteristic mark of genuine chancres, viz. the thickened or callous edge and base; they were likewise attended with the most acute and painful sensation. In the first case the mercury, perhaps, was exhibited longer than necessary; in the second, the quantity was so very inconsiderable, that the cure cannot in the smallest degree be attributed to its use. The want of the callous edge and base, may probably account for the quick and extraordinary destruction of parts. This peculiar diseased action may be classed under that description

description which Dr. Adams has with great propriety demoninated the floughing phagædena, or nigrities serpens of Celsus.

The subject of discriminating one disease from another, is an important one,\* and I have endeavoured, as far as my ability would enable

\* Of the advantage of distinguishing the difference of diseased action, we have a strong illustration in Sir William Fordyce's Review of the Venereal Disease, in a communication made by the late Mr. Heaviside. In the neighbourhood of Hatfield, in the year 1767, a number of people were attacked with the numbs, attended with a considerable swelling about the throat, and articulation of the jaws, which was succeeded by an inflammation in the testes in every way resembling hernia humouralis, and which immediately relieved the fauces: in women it produced a considerable degree of swelling and inflammation in the labia pudendorum. The complaint was generally relieved by cooling and purging medicines. A less accurate observer of the progress of disease, from the well known sympathy between the throat and the genitals, might have attributed these morbid appearances to a venereal affection, and the exhibition of any febrifuge medicine, under such circumstances, would probably have been considered

enable me, to point out the distinction between various diseased appearances of the genitals and those connected with venereal contagion, many of them assuming that similarity as not to be discovered but by the most accurate attention. This cannot be too much insisted on, for the more the subject is revolved in my mind, the more I am inclined to suspect the differences of opinion respecting the remedies under consideration, have arisen.

Mr. Cruickshank has candidly acknowledged, that he does not attempt to account for the numerous failures different practitioners have experienced, and concludes his remarks with two observations not less important than singular. “ Either these re-  
“ remedies cure the lues venerea; or in ninety

considered as possessing specific properties in destroying venereal contagion.

The numbs are divided into two kinds, the parotitis suppurans, and parotitis mutabilis; the latter seems to have been the disease here noticed.

“ nine



“ nine cases out of one hundred, the disease  
 “ cures itself.”

The few cases that have been selected, (and they are only a part of a number that might be produced) do not, I think, give very strong proof of the antisyphilitic quality of these remedies. They were administered with the greatest care and attention, and in many instances persevered in for a greater length of time than is usually recommended, yet in no individual instance was the specific quality of these remedies apparent, and we cannot but lament with Mr. Hunter, that “ nothing can shew more the  
 “ ungrateful or unsettled mind of man than  
 “ his treatment of this medicine (mercury):  
 “ if there is such a thing as a specific, mer-  
 “ cury is one for the venereal disease; yet  
 “ mankind are in pursuit of other specifics  
 “ for the disease, as if specifics were more  
 “ common than diseases; while at the same  
 “ time they are too often contented with

“ the common mode of treating many other  
 “ diseases for which they have no specific.”\*

With regard to the disease possessing the power of effecting its own cure, not only the melancholy occurrences of the present time, but the many lamentable cases on record indisputably give the negative to that assertion.

Upon the most careful and deliberate review of the subject, I cannot but be of opinion, that although these remedies may occasionally be usefully employed as auxiliaries, yet in no single instance where syphilis has been unequivocally marked, did the saline substances appear entitled to any specific quality.

Happy would it be for mankind, if the cautionary advice of the illustrious Lord

\* Vide Venereal Disease, page 335.

Bacon was pursued with more sedulity.  
 “Causa vero & radix fere omnium malorum  
 “in scientiis ea una est; quod dum mentis  
 “humanæ vires falso miramur & extolli-  
 “mus, vera ejus auxilia non quæramus.”\*

\* Vide Novum Organum Scientiarum, Aphorism 9,  
 Lib. 1.





OBSERVATIONS  
ON THE  
PNEUMATIC DOCTRINE.

AS the exhibition of oxygenous substances in other disorders as well as the syphilitic, hath of late engaged much of the public attention, a few cursory remarks will not, I trust, be considered altogether inapplicable. The subject itself is far from being novel, for in the last as well as the preceding century, there were philo-acidi as well as miso-acidi.\* The remedy was the same, although the *modus agendi* might be differently explained.

The instability of all human institutions is daily verified, however we may admire the apparent strength and wisdom of their

\* Vide Turner's Syphilis, page 33.

construction. Nothing can more strongly exemplify this remark than the extraordinary changes medicine as well as politics have recently undergone. If the destruction of a delusive and imperfect system was merely the harbinger of another, founded on less erroneous principles, calculated to extend our ideas, and lead to the adoption of more successful means; where is the individual who would not contribute his mite to the accomplishment of so great an attainment? And while he might deplore the violence of the temporary concussion, endeavour to console himself under the expectation of experiencing an increased amelioration in this earthly existence: agreeably to the opinion of an ingenious writer, who has affirmed, that the animated beings of this terraqueous globe “ have constantly improved, and are “ still in a progressive state of improvement.”\*

\* Zoonomia, vol. i. sect. 39, 7, 9.



Have the late medicinal changes contributed to this desirable improvement?

Have the pneumatic remedies succeeded, where others of known and experienced efficacy have failed?

Have they acted specifically, in the removal of a single disease?

Or, have the promised advantages been commensurate with the sanguine expectation of their advocates?

If the language of truth and sincerity be adopted, I am apprehensive we shall have the mortification to find most of these inquiries answered in the negative. While the love of novelty and the gratification of personal vanity continue to operate so strongly on the human mind, we cannot wonder at the multiplication of new specifics, and the variety of ill digested theories that are so frequently presented to our notice.

When the immortal Newton\* illumined the world with his ideas on gravitation, Dr. Mead† and other writers about that period, attempted not only to explain many of the operations of the animal system, as connected with that principle, but that it occasioned many of our diseased actions. This theory, for a considerable length of time, had been almost exploded; but from some ingenious observations of Dr. Darwin,‡ may perhaps acquire a revival of its former celebrity.

The mechanical theory of Boerhaave§ had its advocates for a time, as well as the putridity of Pringle,|| and the spasm of Cullen.¶ This again was succeeded by the Bru-

\* Newtoni Principia Mathematica Philosophiæ Naturalis.

† Mead de Imperio Solis ac Lunæ.

‡ Dr. Darwin's Zoonomia.

§ Van Swieten's Commentaries on Boerhaave's Aphorisms.

|| Sir John Pringle's Diseases of the Army.

¶ Dr. Cullen's First Lines of the Practice of Physic.



nonian system,\* which, at its commencement, promised to be more formidable than any yet extant, but, like many other ephemeral productions, flourishes for the day, and will perhaps be rescued from oblivion rather from the singularity of its tenets, than the utility of its doctrine.

We now approach an era memorable for the brilliancy of its discoveries, which are calculated not only to excite curiosity, but, by a prudent application, may prove the source of innumerable advantages.

Phlogiston was, for a considerable period, admitted to be a principle in the composition of most bodies, and the *causa sine qua non* of particular modifications of matter. Although this inflammable principle had never been separately exhibited, yet it was considered a flagrant species of infidelity to doubt its existence. When our ingenious

\* Dr. J. Brown's Elements of Medicine.

countryman,



countryman, Mr. Cavendish,\* discovered that water was not a simple but a compound body, and the French chemists † had satisfactorily shewn that the combustible bodies acquired a considerable increase of weight from that process, by the decomposition of the atmospheric air, the Stahlans began to feel some difficulty in supporting their favourite theory, but were not willing to abandon it immediately. The extraordinary phenomenon of the increase of weight, observable in metallic calces, they ascribed to a positive levity in phlogiston, or the singular property of counteracting gravitation. The production of oxygene during combustion they conceived might not arise from the decomposition of atmospheric air, but might, by forming new combinations, liberate bodies possessed of the properties of acids. Oxygene, they contend, like phlogiston, hath never been separately exhibited; it is only known in its gaseous form, and is then com-

\* Philosophical Transactions for 1784, page 126.

† Lavoisier's *Traité Élémentaire de Chimie*.

bined with caloric, or the matter of heat, whose parts repel each other, and, by virtue of this repulsion, is the cause of the elasticity of aeriform fluids.\* Exhibit your oxygene (say they) in a separate uncombined state, and we in return will furnish a portion of our phlogiston: perhaps your caloric is the very phlogiston whose existence is so strenuously denied.

These are some of the principal arguments employed against the antiphlogistic doctrine. The degree of credit attached to them will be in proportion to the respective merit that either the old or the new system may be supposed to possess.

A third party, not satisfied with the explanation that either theory separately affords, have suggested the propriety of com-

\* Vide Minutes of the Society for promoting Philosophical Experiments and Conversation, in which satisfactory evidence of the materiality of caloric is produced.



bining them, and thereby forming, as they conceive, a system infinitely more satisfactory, and more extensively useful. This is the opinion of many great and philosophical men,\* who contend, that there is a reciprocal interchange of the body submitted to combustion, and the atmospheric air; as the former emitted phlogiston, the latter imparted heat and light: that the existence of phlogiston and oxygene at the same time is incompatible, and that the combustion of metallic substances may be considered as a double electric attraction, the metal dissipating the phlogiston, while the oxygene is absorbed by the oxyd.

From these supposed important chemical discoveries, it was reasonable to think they might be advantageously employed, not only in elucidating some physiological difficulties,

\* Vide Dr. Crawford's Experiments and Observations on Animal Heat and the Inflammation of Combustible Bodies.

but



but that they might be successfully administered in eradicating disease.

The modern philosophers, in the plenitude of their good wishes to extend knowledge, and alleviate the afflictions of mankind, have, I am apprehensive, far exceeded the rational bounds of all human probability. To oxygene not only many of the important functions of the body are imagined to owe their influence, but most of our diseased actions are attempted to be explained, either on an accumulation or diminution of this principle.

Alchemy\* was formerly the favourite study, and men of exalted talents were fully persuaded of the possibility of discovering the philosophers' stone, and the subsequent recompense of the golden harvest. We at present, with our assumed superiority of

\* Vide Sir Hugh Platt's Jewel House of Art and Nature, 4to. printed in 1650, page 81.

knowledge,

knowledge, laugh at the absurdity of such chimerical phantoms, and can scarcely suppress our indignation, that men, dignified with the title of philosophers, should have bestowed so much labour, ability, and expence on a scheme that could not fail to prove abortive ; yet I question whether we are not suffering ourselves to be deceived by expectations almost as extravagant and as visionary : for as Dr. Crichton \* has very judiciously remarked, “ Systems are formed in  
 “ a trice, and constituted theories by the  
 “ authority of one or two individuals. We  
 “ simplify every thing in a most wonderful  
 “ manner, and endeavour to approach the  
 “ sacred fountain of truth by leaps and  
 “ bounds, as if we were suddenly endowed  
 “ with powers totally unknown to the philosophers of former ages. Man is a fibre  
 “ which bends itself into a ring, then becomes a tube, and then an animal.† The

\* Vide Crichton's Inquiry into the Nature and Origin of Mental Derangement, p. 51.

† Zoonomia, sect. 39.



“ principle of his motion is oxygene :\* ideas  
 “ are motions of fibres :† vegetables have  
 “ ideas :‡ children may be begotten of any  
 “ sex, shape, or features, at the will of the  
 “ male parent.§ The whole of living bo-  
 “ dies are made up of a few airs ; and the  
 “ great globe itself is only a splinter of a  
 “ fractured sun.”||

Few there are I believe who have atten-  
 tively perused Dr. Darwin's Zoonomia, that  
 are not delighted with his transcendant ta-  
 lents. His beautiful arrangement, and the  
 brilliancy of his imagination, are so inimi-  
 table, that the mind is bewildered which  
 most to admire, the originality of the de-  
 sign, or the grandeur of the execution : yet  
 with all these powerful claims to popular  
 estimation, how much it is to be lamented,

\* Girtanner on Irritability.

† Zoonomia, sect. 3.

‡ Ibidem, sect. 13.

§ Ibidem, sect. 39.

|| Buffon's Theory of the Earth.



that a production of such literary merit should contain so little practical information. But our surprize must cease, when we observe the natural and morbid operations of the system so frequently sacrificed, to preserve the order, proportion, and exact symmetry of an artificial classification.

When we perceive the facility with which system after system is introduced into the world, and when assumed facts are too frequently made subservient to a favourite theory, would not the healing art be considerably improved if this erroneous taste for systematic compilation was compleatly abandoned? \* If the practice of medicine be the study of nature, why do we so egregiously wander from her paths? And why are we not more attentive to her operations? Convinced as we all are that one well authenticated fact is superior to millions of specula-

\* Lord Shaftesbury has sarcastically remarked, that “The most ingenious way of becoming foolish is by *a system.*” *Characteristicks*, vol. i. p. 196.

tive opinions. What was it that immortalized the character of Hippocrates and Sydenham, and acquired them that decided claim to our esteem and veneration, but a vigilant attention to the operations of nature, and a strict adherence to the immutable laws of truth? Let us endeavour to imitate such laudable examples, and let experience and observation be our only directors. With too much truth has it been remarked, that “*La severe et juste posterité*  
 “*fera étonnée sans doute de voir que dans*  
 “*le dix-huitième siècle il y ait eu des Phi-*  
 “*losophes, des Naturalistes, des Physiciens,*  
 “*qui même dans les choses les plus impor-*  
 “*tantes, ont osé substituer des conjectures à*  
 “*l’expérience, quoique l’expérience eut été*  
 “*aussi aisée à faire, que décisive.*”\*

If we carefully examine some of the medico-pneumatic opinions, I am fearful the

\* *Traité sur le Venin de la Vipere, par M. Fontana, tom. i. p. 71.*

delicate texture of these fine spun theories, like tender exotics on exposure, will shrink and become effete. The fabric, though beautiful and ingenious, is deficient in the first and most important architectonic rule—it is destitute of a basis—it is “a doctrine built upon the sand,” as a distinguished modern philosopher\* has very appropriately expressed it.

Conformable to the pneumatic theory, diseases may be classed under two general heads, those arising from a redundancy of oxygen, and those occasioned by a deficiency of that principle.

Phthisis pulmonalis, according to this theory, is attributed to an hyper-oxygenation, and the means most conducive to a cure, are said to be those which diminish the quantity of oxygen. It has been remarked, that the progress of consumption has been suspended during pregnancy, when it is con-

\* M. Fourcroy.



jectured, the supply of oxygene is lessened by the foetus receiving a certain proportion of this necessary pabulum. But it is a generally acknowledged fact, that pregnancy, independant of a few trifling symptoms connected with that state, is, of all others, one of the most healthy ; not only the progress of consumption, but many other complaints, has been suspended till after parturition. How very rare are the instances of women dying during pregnancy !

The advocates for this doctrine cannot be ignorant of the important use the lungs are destined for, agreeable to the ingenious opinion of Dr. Crawford ;\* the quantity of oxygene must be rather diminished, than increased, for the supposition of a larger proportion of oxygene being transmitted by a diseased viscus, whose action must be so much impaired, is inconsistent with the generally adopted opinion, respecting the function of the lungs.

\* Vide Crawford's Experiments and Observations on Animal Heat.

Pulmonary ulcers, Dr. Darwin\* conceives, are prevented from healing by the perpetual exposure to the action of the air on their surfaces, converting their mild purulent matter into an acid and contagious ichor; and he thinks that this new species of acid possesses infectious properties, like the itch and tinca. The infectious property of consumption, is probably more a speculative opinion than a practical fact: but other motives induced me to notice this remark. In the cure and treatment of external ulcers, the application of the metallic oxyds are strenuously recommended, and their supposed efficacy is attributed to the extrication of oxygene. Dr. Darwin has ingenuously expressed his surprize that oxygene, derived from the atmosphere, should prove so deleterious, while that resulting from the decomposition of the metallic oxyds, should act so salutarily. He has endeavoured to account for this apparent

\* Vide Zoonomia, Vol. I. sect. xxxiii. 27. and Vol. II. cl. ii. 1, 6, 7.

contradiction,

contradiction, by remarking, that the different oxyds of lead, zinc, and mercury, produce this salutary effect by their stimulus; and these metallic oxyds, not being decomposed by their contact with animal matter, no new acid or contagious material is produced; acting simply by promoting absorption. But in the pulmonary ulcers, which cannot protect themselves from the air, the uncombined oxygene unites with the purulent matter, converting it into a contagious ichor, which, by infection, not by erosion, enlarges the ulcer as in the itch and tinea.

While we admit the ingenuity of the argument, the justness of its application may be doubted. Metallic oxyds are said to produce their effect by their stimulus only, without their being decomposed by their contact with animal matter. If no decomposition takes place, how can oxygene be separated? and how can a substance, not yet brought into action, be capable of stimulating; when, on the contrary, in the pul-



monary ulcers this animal matter is asserted to have a strong attraction for oxygene, with which it unites, converting it into a contagious ichor? As oxygene is admitted to be the same, from whatever source derived, it appears almost irreconcilable, why, in the one instance, it should produce all these salutary effects by promoting absorption, and in the other, it should operate so perniciously, by converting an innocent purulent matter into an infectious malignant ichor. We have yet to learn, by what process the matter of external ulcers is prevented from being converted into this acid and contagious ichor.

At one time\* the hectic fever supervening from effused pus, is ascribed to the azotic part of the atmosphere; at another time,† the former opinion is retracted, and to oxygene are all their deleterious effects attributed.

\* Zoonomia, Vol. I. sect. xxviii. 2.

† Zoonomia, Vol. II. cl. ii. 1, 6, 6.

Dropfy, intermittents, chlorosis, and most of those fevers denominated typhus, are considered as diseases occasioned by an abstraction of oxygene.

Intermittent fevers that had resisted the usually adopted methods, were, it is said, speedily relieved by the exhibition of vital air; and our attention is called to one case of ague,\* which had, as we are informed, baffled every effort to subdue it, for more than twelve months. The vital air was administered in the proportion of eight quarts to thirty of atmospheric air. Two or three paroxysms only, and those very trifling, took place after the use of this remedy. I will not insist much here on the powers of the imagination, or the influence mental impressions may have in promoting or retarding the progress of disease, they are sufficiently known.†

\* Considerations on Factitious Airs. Miscellaneous cases.

† Some very interesting information on this subject may be obtained, by perusing Dr. Falconer's Dissertation



We are none of us ignorant of the antiquity and success of charms. But it is most probable from an attention to this case, that the disease was exhausted before the remedy was applied.

Chlorosis is produced as another instance of abstraction of oxygen; a variety of successful cases are introduced, and reported to have obtained relief in a week or a fortnight, from the inhalation of vital air, producing its salutary effects by imparting an increased quantity of oxygen. The efficacy of chalybeates in this complaint is well known, but I question whether we must not attribute its success to something more than the extrication of oxygen. There are few who possess any regard for their professional reputation, would recommend a mercurial course in chlorotic disorders, and yet both the oxyd of mercury, as well as steel, abounds with oxygen.

tion on the Influence of the Passions upon Disorders of the Body.

The



The spasmodic asthma of a lady,\* who had been severely afflicted for years, is said to have been relieved by inhaling vital air. These violent paroxysms came on periodically. But it should be remarked, however, that she took at intervals several emetics, a solution of arsenic, and other active medicines. It is happy for the lady she was relieved; but other remedies, as well as the aerial, were perhaps entitled to a proportionate share of credit.

The 36th Case presents us with an inflammation of the breasts, in a woman giving suck. As the case was urgent, the speediest benefit was thought would be derived from the disoxygenation of the blood. Æther burnt in atmospheric air, rendered chiefly azotic and inflammable air, was immediately administered. Cloths wrung in yeast, were applied to the inflamed surface. An electuary of sulphur, and sulphurated kali, was

\* Considerations on Factitious Air, Case xi.

taken three times a day ; half a dozen leeches were applied twice to the breast ; and to divert the current from the inflamed parts,\* a Burgundy pitch plaister was applied betwixt the shoulders, which acted like a blister. In a week the cure was accomplished, and this cure was effected, as we are informed, simply by the inhalation of a reduced atmosphere. Did neither the application of the yeast, the leeches, or the blister, contribute in affording some relief? How long will enlightened minds continue to be bigoted to a favourite theory?

Dr. Hamilton,† in a late publication, replete with much interesting information, observes, that hydrophobic bodies tend to a rapid putrefaction ; hence he considers a defect of the oxygenous principle, one of the consequences of the disease. If it be oxygene

\* Diversion, revulsion, and such like terms, I thought were rendered obsolete in the modern nomenclature.

† Vide Hamilton's Remarks on Hydrophobia, Vol. II. page 101.

that

that gives power to muscular motion, its absence, on the contrary, must occasion weakness; as great exertions create proportionate debility by the expenditure of this principle. In reviewing the different phenomena of this melancholy disease, the vital air, the Doctor remarks, seems better adapted to a cure than the other species of elastic fluids.

We have satisfactory evidence that oxygen imparts a certain irritability to the blood, and may perhaps be the cause of muscular motion; yet this is but an hypothesis, muscular motion may as well depend on the nervous influence, or agreeable to the more modern opinion, it may be a peculiar kind of elective attraction, in which the minute fibrillæ have a power of approximating themselves, and contracting a closer union.\*

With respect to the efficacy of vital air

\* Vide Dr. Blane's Croonian Lectures on Muscular Motion, in Philosophical Transactions for 1788.



in hydrophobia, as dissection unfortunately throws so little light on the nature of this disease, we have no other mode to direct our reasoning, but an attention to the symptoms and progress of the complaint during life, and these evidently point out an increased excitement throughout the system. As all oxygenous substances are notoriously known to excite an increased action, they cannot, I think, be very advantageously employed in a disease, apparently of so inflammatory a nature.\*

\* In many well attested cases of hydrophobia, dissection has discovered no appearance of disease about the fauces or œsophagus. Dr. Hamilton seems to consider the principal seat of this disorder in the stomach, from the ventricular abrasions that have in some few instances been found. Dr. Darwin is of a similar opinion, viz. that the cardia ventriculi is the seat of this disease, and refers the apparent affection about the throat to association. Boerhaave evidently entertained no doubt about the inflammatory nature of this disease; he expressly says *morbus summe inflammatorius*. Admitting the accuracy of these opinions, the nature of this disease will not be disputed. The inhalation of so stimulating a material as oxygene, would rather aggravate than mitigate the complaint.

Dr. Rollo,\* to whom the medical world are under much obligation, for his judicious and successful treatment of a disease, which had hitherto been considered one of the opprobrium medicorum, will not, I trust, suffer the value of his important practical information to be diminished by any erroneous speculative opinion. He conceives that both diabetes mellitus, and phthisis pulmonalis, depend on an hyder-oxygenation of the system; and that both may be relieved by similar means. The former connected with a morbid state of the stomach, the latter with that of the lungs. Attempts have already been made to shew the improbability of phthisis originating from an increased quantity of oxygene, perhaps objections equally forcible may be urged against diabetes arising from such a cause. This disease generally attacks people rather in the decline of life, and those frequently that have been accus-

\* Vide Rollo's Account of the Cases of the Diabetes Mellitus, &c.

tomed to the luxuries of a splendid table, or committed some opprobrious excess, in which the constitution has been incessantly excited into a strong and febrile action. Although in the diabetes, partially, there may be an increased action, yet the system generally labours under a defective energy; and agreeably to the pneumatic theory, rather requires the aid of an augmentation of oxygene, than a diminution of that principle.

In perusing the number of pneumatic cases that have been presented to the public, and considering the favourable opinion entertained of the efficacy of the aerial remedies; it must be thought by every impartial person rather extraordinary, that these infallible specifics should be combined with other powerful remedies. Surely if they have merit, let that merit rest on its own basis, and do not diminish its eclat, by these unnecessary combinations.



In the many successful cases related of phthisis pulmonalis, chlorosis, dropy, asthma, dyspepsia, and other diseases, the trumpet of praise is incessantly sounded in favour of the aerial remedies, while emetics, cathartics, opiates, and all the active, and more approved medicines, are considered inert, and too insignificant for notice.

The sentiments of M. Fourcroy on this subject, are alike interesting and ingenuous; this enlightened philosopher cannot be supposed to detract from the merit of that structure, which he himself hath taken so much pains to elevate.

“ Mais, si j'annonce avec sécurité l'espérance d'une heureuse et prochaine révolution dans l'art de guérir, je dois, en même tems, que je semble la provoquer, combattre les dangereuses conséquences de cette pétulante activité, qui brûle les cerveaux au lieu de les échauffer de ce précoce amour des innovations, qui ne veut que détruire sans avoir rien à remettre

à remettre à la place des ruines dont il s'entoure. Je repousse également et la prétendue suffisance de la doctrine Brownienne pour toute théorie de l'art de guérir, et l'indiscrete explication du mécanisme entier de la vie animale par une puissance chimique. Je ne brûle point les livres anciens avec Paracelse, je ne brise point les vases pharmaceutiques, je ne proscriis point d'un seul mot toute la matiere médicale, je conserve tout ce qui existe, je ne sacrifie point toutes les connoissances acquises à une doctrine bâtie encore sur le fable. Il seroit fou de rejeter ce qu'on possède, d'eteindre tout-à-coup le flambeau d'une longue expérience, de renoncer à l'empirisme raisonné qui dirige la pratique de la médecine pour embrasser un fantôme.\*

The progress of useful enquiry, no liberal mind would ever wish to discourage. The

\* Mémoire sur l'Application de la Chimie pneumatique à l'Art de guérir, &c. Par le cit. Fourcroy, Annales de Chimie, No. 84. An. vii. Tom. xxviii. page 225.

collision of opposite sentiments hath frequently enlightened important subjects, that would otherwise, probably, have remained in impenetrable darkness. It is not the use, but the abuse of this invaluable privilege that is censurable.

Too frequently have mankind assailed the medical art, as grounded on uncertain and precarious principles, changeable at the will and caprice of one or two individuals, and not supported with that demonstrative evidence, that attends many other pursuits. And why have these charges been exhibited? Not from any deficiency in the value and importance of the art itself, for that is invulnerable; but from the multiplicity of theoretical speculations, and the licentious spirit of innovation, which at all times, but more particularly at the present, disqualify the mind from acquiring knowledge by the only certain, though slow and progressive means, the study of nature.

———*Servare modum, finemque tenere*

*Naturamque sequi.*

LUCAN, Lib. ii.

H

With



With an assurance almost bordering on impiety, we vainly presume to account for first causes, and the origin of the *πρωτον ωον*. A little more modesty would convince us of the folly and impracticability of the attempt.

That memorable description of danger, which Virgil has so forcibly represented, cannot be too strongly imprinted on our minds—

Dextrum Scylla latus, lævum implacata Charybdis  
Obfidet. ÆNEID, Lib. iii.

Extremes of every kind ought carefully to be avoided, destruction perhaps is equally inevitable, whether smote on the rock of antiquated theories, or overwhelmed in the whirlpool of modern pneumatism.

The beneficent Author of the Universe, in his wonderful display of wisdom and goodness, hath not only amply supplied us with those things that contribute to our comfort and happiness in *health*; but he hath, with  
ineffable

ineffable condescension to *human infirmity*, abundantly distributed throughout the world remedies adapted to every disease. Let us no longer then ungratefully complain of the paucity of remedies, but rather let us lament the want of a more judicious application of them. Let us endeavour to cultivate those only of known and experienced efficacy. Let all false theory, all chimerical reasoning, be for ever abandoned. An inflexible adherence to these precepts, will not only secure our own interest, but infallibly promote the general good of mankind.

FINIS.













